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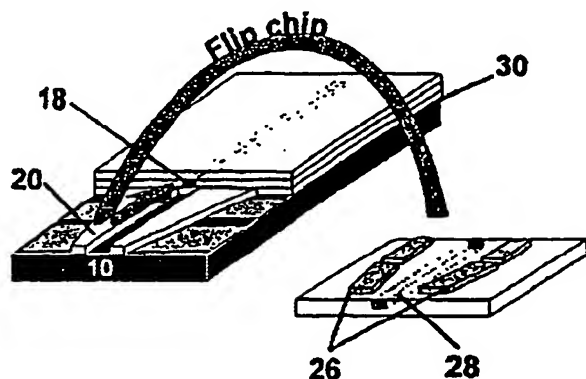
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(54) Title: HYBRID INTEGRATION OF ACTIVE AND PASSIVE OPTICAL COMPONENTS ON AN SI-BOARD

(57) Abstract: The present invention relates to an as-  
sembly structure and a method for assembling active and  
passive photonic and/or optoelectronic devices on a sil-  
icon board. The invention relates in particular to an as-  
sembly structure and a method for aligning the photonic  
devices during the assembling procedure. According to  
the present invention, the assembly structure comprises  
one or more alignment features comprising tapered side  
surface parts in directions at least substantially parallel to  
an optical axis. By providing a tapering in a direction at  
least substantially parallel to the first optical axis, any in-  
accuracies primarily affects the non-critical positioning  
in the direction along the optical axis, whereas the critical  
positioning transverse to the optical axis merely de-  
pends on the symmetry of alignment features. The errors  
from the inherent inaccuracy of the position and shape of  
alignment features are thereby minimised. Also, the de-

vices to be aligned are preferably arranged on top of the alignment features which forms part of the basic structure on the silicon board. All alignment features can thereby be defined in a single mask step together with the structures with which the alignment is to be carried out, resulting in an improved accuracy of the assembly structure. The resulting components will be used especially for broadband telecommunication components.

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